



EXHIBIT A
LISTING OF ALL CLAIMS AND AMENDMENTS
(04/06/2006)

Amendments to the Claims

Claims 1 – 17 (previously canceled)

Claim 18 (previously presented)

18. A system for commanding at least one motion control device, comprising:
a set of motion operations;
a set of software drivers, where at least one software driver is selectable and associated with at least one motion control device; and
a software system for selecting at least one selectable software driver from the set of software drivers and calling a set of component function calls to command at least one motion control device associated with the at least one selectable software driver based on the at least one selected software driver such that at least one motion control device performs at least one motion operation.

Claim 19 (previously presented)

19. A system as recited in claim 18, in which the software system comprises a user interface that allows a user to select the at least one selectable software driver.

Claim 20 (previously presented)

20. A system as recited in claim 18, in which the software system comprises a selection interface that allows the at least one selectable software driver to be selected programmatically.

Claim 21 (previously presented)

21. A system as recited in claim 18, in which at least one motion operation is capable of causing data to be sent to at least one motion control device and at least one motion operation is capable of causing data to be received from at least one motion control device.

Claim 22 (previously presented)

22. A system as recited in claim 18, in which at least one motion operation is capable of being used to monitor at least one motion control device and at least one motion operation is capable of causing the motion control device to be configured.

Claim 23 (previously presented)

23. A system as recited in claim 18, in which at least one of the software drivers in the set of software drivers conforms to a common driver interface.

Claim 24 (previously presented)

24. A system as recited in claim 23, in which the common driver interface comprises a set of component functions that are exposed to the software system by at least one of the software drivers.

Claim 25 (original)

25. A system as recited in claim 23, in which the software system communicates with the at least one motion control device through the common driver interface of the software driver associated with the at least one motion control device.

Claim 26 (previously presented)

26. A system for commanding at least one motion control device, comprising:
a set of motion operations;
an application program comprising a set of component function calls, where the application program is capable of directing at least one motion control device to perform at least one motion operation;
a set of software drivers, where at least one software driver is selectable and associated with at least one motion control device;
a software system for selecting at least one selectable software driver from the set of software drivers and commanding at least one motion control device associated

with the at least one selectable software driver based on the at least one selectable software driver and the component functions called by the application program.

Claim 27 (previously presented)

27. A system as recited in claim 26, in which the software system comprises a user interface that allows a user to select the at least one selectable software driver.

Claim 28 (previously presented)

28. A system as recited in claim 26, in which the software system comprises a selection interface that allows the at least one selectable software driver to be selected programmatically.

Claim 29 (previously presented)

29. A system as recited in claim 26, in which at least one motion operation is capable of causing data to be sent to at least one motion control device and at least one motion operation is capable of causing data to be received from at least one motion control device.

Claim 30 (previously presented)

30. A system as recited in claim 26, in which at least one motion operation is capable of being used to monitor at least one motion control device and at least one motion operation is capable of causing the motion control device to be configured.

Claim 31 (previously presented)

31. A system as recited in claim 26, in which at least one of the software drivers in the set of software drivers conforms to a common driver interface.

Claim 32 (previously presented)

32. A system as recited in claim 31, in which the common driver interface comprises a set of component functions that are exposed to the software system by at least one of the software drivers.

Claim 33 (previously presented)

33. A system as recited in claim 31, in which the software system communicates with the at least one motion control device through the common driver interface of the software driver associated with at least one motion control device.

Claim 34 (previously presented)

34. A system as recited in claim 31, in which the application program communicates with the at least one motion control device through the common driver interface of the software driver associated with at least one motion control device.

Claim 35 (previously presented)

35. A system for communicating with a motion control device, comprising:
a set of motion operations;
a software system comprising a set of function calls, wherein the software system is capable of directing at least one motion control device to perform at least one motion operation;
a software driver associated with the motion control device; and
motion software for commanding the motion control device based on the software driver and the functions called by the application program such that the motion control device performs at least one motion operation.

Claim 36 (previously presented)

36. The system of claim 35, wherein the software system communicates with the motion software.

Claim 37 (previously presented)

37. The system of claim 35, comprising a set of software drivers associated with at least one motion control device, wherein at least one software driver is associated with at least one motion control device.

Claim 38 (previously presented)

38. The system of claim 37, wherein each of the set of software drivers conforms to a common driver interface.

Claim 39 (original)

39. The system of claim 38, wherein the common driver interface comprises a set of functions that are exposed to the motion software.

Claim 40 (previously presented)

40. The system of claim 38, wherein the motion software communicates with the motion control device through the common driver interface of the at least one software driver associated with at least one motion control device.

Claim 41 (previously presented)

41. The system of claim 37, comprising a selector for selecting the at least one software driver associated with the at least one motion control device from the set of software drivers.

Claim 42 (previously presented)

42. The system of claim 41, wherein the selector comprises a user interface that allows a user to select the at least one software driver associated with the motion control device.

Claim 43 (previously presented)

43. The system of claim 41, wherein the selector comprises a selection interface that allows the at least one software driver associated with the motion control device to be selected programmatically.

Claim 44 (previously presented)

44. The system of claim 35, wherein at least one motion operation is capable of causing motion data to be sent to at least one motion control device.

Claim 45 (previously presented)

45. The system of claim 35, wherein at least one motion operation is capable of causing motion data to be received from at least one motion control device.

Claim 46 (previously presented)

46. The system of claim 35, wherein at least one motion operation is capable of causing at least one motion control device to be controlled.

Claim 47 (previously presented)

47. The system of claim 35, wherein at least one motion operation is capable of being used to monitor the motion control device.

Claim 48 (previously presented)

48. The system of claim 35, wherein at least one motion operation is capable of causing at least one motion control device to be configured.

Claim 49 (previously presented)

49. A system for communicating with a motion control device, comprising:
a set of motion operations;

a software system comprising a set of function calls, wherein the software system is capable of direction at least one motion control device to perform at least one motion operation;

a plurality of software drivers, wherein at least one software driver is associated with at least one motion control device;

a selector for selecting from the plurality of software drivers the at least one software driver associated with at least one motion control device; and

motion software for communicating with the selected motion control device based on the selected software driver and the functions called by the application program.

Claim 50 (previously presented)

50. The system of claim 49, wherein at least one motion operation is capable of causing the motion control device to move in a desired manner.

Claim 51 (previously presented)

51. The system of claim 49, wherein the software system communicates with the motion software.

Claim 52 (previously presented)

52. The system of claim 49, wherein at least one of the plurality of software drivers conforms to a common driver interface.

Claim 53 (original)

53. The system of claim 52, wherein the common driver interface comprises a set of functions that are exposed to the motion software by each of the software drivers.

Claim 54 (original)

54. The system of claim 52, wherein the motion software communicates with the at least one motion control device through the common driver interface of the software driver associated with the at least one motion control device.

Claim 55 (previously presented)

55. The system of claim 49, wherein the selector comprises a user interface that allows a user to select the at least one software driver associated with the motion control device.

Claim 56 (previously presented)

56. The system of claim 49, wherein the selector comprises a selection interface that allows the at least one software driver associated with the motion control device to be selected programmatically.

Claim 57 (previously presented)

57. The system of claim 49, wherein at least one motion operation is capable of causing motion data to be sent to at least one motion control device.

Claim 58 (previously presented)

58. The system of claim 49, wherein at least one motion operation is capable of causing data to be received from at least one motion control device.

Claim 59 (previously presented)

59. The system of claim 49, wherein at least one motion operation is capable of causing at least one motion control device to be controlled.

Claim 60 (previously presented)

60. The system of claim 49, wherein at least one motion operation is capable of being used to monitor at least one motion control device.

Claim 61 (previously presented)

61. The system of claim 49, wherein at least one motion operation is capable of causing at least one motion control device to be configured.

Claim 62 (currently amended)

62. A system for communicating with ~~a~~at least one motion control device, comprising:
a plurality of software drivers, wherein at least one software driver is associated with at least one motion control device;
a selector for selecting the at least one software driver associated with at least one motion control device from the plurality of software drivers; and
a software system for commanding the at least one motion control device to perform an action based on the at least one selected software driver associated with at least one motion control device.

Claim 63 (previously presented)

63. The system of claim 62, wherein the software system commands at least one motion control device such that the selected motion control device moves in a desired manner.

Claim 64 (previously presented)

64. The system of claim 62, wherein at least one of the plurality of software drivers conforms to a common driver interface.

Claim 65 (previously presented)

65. The system of claim 64, wherein the common driver interface comprises a set of functions that are exposed to the software system by at least one of the software drivers.

Claim 66 (original)

66. The system of claim 64, wherein the software system communicates with the selected motion control device through the common driver interface of the software driver associated with the selected motion control device.

Claim 67 (previously presented)

67. The system of claim 62, wherein the selector comprises a user interface that allows a user to select the at least one software driver associated with at least one motion control device.

Claim 68 (previously presented)

68. The system of claim 62, wherein the selector comprises a selection interface that allows the at least one software driver associated with at least one motion control device to be selected programmatically.

Claim 69 (previously presented)

69. The system of claim 62, wherein at least one software driver is capable of causing motion data to be sent to at least one motion control device.

Claim 70 (previously presented)

70. The system of claim 62, wherein at least one software driver is capable of causing data to be received from at least one motion control device.

Claim 71 (previously presented)

71. The system of claim 62, wherein at least one software driver is capable of causing at least one motion control device to be controlled.

Claim 72 (previously presented)

72. The system of claim 62, wherein at least one software driver is capable of being used to monitor at least one motion control device.

Claim 73 (previously presented)

73. The system of claim 62, wherein at least one software driver is capable of causing at least one motion control device to be configured.

Claims 74 – 85 (previously canceled)

Claim 86 (previously presented)

86. A system for communicating with a motion control device, comprising:
 an application program comprising a set of motion software function calls, wherein the application program is capable of requesting at least one motion control device to perform at least one motion operation;
 a plurality of software drivers, wherein at least one software driver is associated with the at least one motion control device;
 a software system for selecting the at least one software driver associated with the selected motion control device from the set of software drivers and communicating with at least one motion control device based on the at least one selected software driver and the motion software functions called by the application program.

Claim 87 (original)

87. The system of claim 86, wherein each of the plurality of software drivers conforms to a common driver interface.

Claim 88 (previously presented)

88. The system of claim 87, wherein the common driver interface comprises a set of functions that are exposed to the software system by at least one of the software drivers.

Claim 89 (previously presented)

89. The system of claim 87, wherein the software system communicates with at least one motion control device through the common driver interface of the software driver associated with at least one motion control device.

Claim 90 (previously presented)

90. The system of claim 87, wherein the application program communicates with at least one motion control device through the common driver interface of the software driver associated with at least one motion control device.

Claim 91 (previously presented)

91. The system of claim 86, wherein the software system comprises a user interface that allows a user to select the at least one software driver associated with the motion control device.

Claim 92 (previously presented)

92. The system of claim 86, wherein the software system comprises a selection interface that allows the at least one software driver associated with the motion control device to be selected programmatically.

Claim 93 (previously presented)

93. The system of claim 86, wherein at least one software driver is capable of causing motion data to be sent to at least one motion control device.

Claim 94 (previously presented)

94. The system of claim 86, wherein at least one software driver is capable of causing data to be received from at least one motion control device.

Claim 95 (previously presented)

95. The system of claim 86, wherein at least one software driver is capable of causing at least one motion control device to be controlled.

Claim 96 (previously presented)

96. The system of claim 86, wherein at least one software driver is capable of being used to monitor at least one motion control device.

Claim 97 (previously presented)

97. The system of claim 86, wherein at least one software driver is capable of causing at least one motion control device to be configured.

Claims 98 – 121 (previously canceled)

Claim 122 (previously presented)

122. The system of claim 18, wherein at least one motion operation is capable of causing motion data to be sent to at least one motion control device.

Claim 123 (previously presented)

123. The system of claim 18, wherein at least one motion operation is capable of causing data to be received from at least one motion control device.

Claim 124 (previously presented)

124. The system of claim 18, wherein at least one motion operation is capable of causing the motion control device to be controlled.

Claim 125 (previously presented)

125. The system of claim 18, wherein at least one motion operation is capable of being used to monitor at least one motion control device.

Claim 126 (previously presented)

126. The system of claim 18, wherein at least one motion operation is capable of causing at least one motion control device to be configured.

Claim 127 (previously presented)

127. The system of claim 26, wherein at least one motion operation is capable of causing motion data to be sent to at least one motion control device.

Claim 128 (previously presented)

128. The system of claim 26, wherein at least one motion operation is capable of causing data to be read from at least one motion control device.

Claim 129 (canceled)

Claim 130 (previously presented)

130. The system of claim 26, wherein at least one motion operation is capable of causing at least one motion control device to be controlled.

Claim 131 (previously presented)

131. The system of claim 26, wherein at least one motion operation is capable of being used to monitor at least one motion control device.

Claim 132 (previously presented)

132. The system of claim 26, wherein at least one motion operation is capable of causing at least one motion control device to be configured.

Claims 133 – 147 (previously canceled)

Claim 148 (previously presented)

148. A system as recited in claim 23, in which a definition of the common interface is acquirable from an operating system.

Claim 149 (previously presented)

149. A system as recited in claim 23, in which a definition of the common interface is acquirable from a persistent storage medium.

Claim 150 (previously presented)

150. A system as recited in claim 24, in which the software system is capable of acquiring a definition of the common interface from an operating system.

Claim 151 (previously presented)

151. A system as recited in claim 24, in which the software system is capable of acquiring a definition of the common interface from a persistent storage medium.

Claim 152 (previously presented)

152. A system as recited in claim 31, in which a definition of the common interface is acquirable from an operating system.

Claim 153 (previously presented)

153. A system as recited in claim 31, in which a definition of the common interface is acquirable from a persistent storage medium.

Claim 154 (previously presented)

154. A system as recited in claim 32, in which the motion control component is capable of acquiring a definition of the common interface from an operating system.

Claim 155 (previously presented)

155. A system as recited in claim 32, in which the motion control component is capable of acquiring a definition of the common interface from a persistent storage medium.

Claim 156 (previously presented)

156. A system as recited in claim 38, in which a definition of the common interface is acquirable from an operating system.

Claim 157 (previously presented)

157. A system as recited in claim 38, in which a definition of the common interface is acquirable from a persistent storage medium.

Claim 158 (previously presented)

158. A system as recited in claim 39, in which motion software is capable of acquiring a definition of the common interface from an operating system.

Claim 159 (previously presented)

159. A system as recited in claim 39, in which motion software is capable of acquiring a definition of the common interface from a persistent storage medium.

Claim 160 (previously presented)

160. A system as recited in claim 49, in which the selector comprises a user interface that allows a user to select the at least one selectable motion control device.

Claim 161 (previously presented)

161. A system as recited in claim 49, in which the selector comprises a selection interface that allows the at least one motion control device to be selected programmatically.

Claim 162 (previously presented)

162. A system as recited in claim 49, in which the selectable software driver associated with the selectable motion control device is made accessible to the motion software by the selector.

Claim 163 (previously presented)

163. A system as recited in claim 52, in which a definition of the common interface is acquirable from an operating system.

Claim 164 (previously presented)

164. A system as recited in claim 52, in which a definition of the common interface is acquirable from a persistent storage medium.

Claim 165 (previously presented)

165. A system as recited in claim 53, in which the motion software is capable of acquiring a definition of the common interface from an operating system.

Claim 166 (previously presented)

166. A system as recited in claim 53, in which the motion software is capable of acquiring a definition of the common interface from a persistent storage medium.

Claim 167 (previously presented)

167. A system as recited in claim 62, wherein the software system is capable of communicating with at least one selected software driver such that at least one motion control device moves an object in a desired manner.

Claim 168 (previously presented)

168. A system as recited in claim 62, in which the selector comprises a user interface that allows a user to select the at least one selectable motion control device.

Claim 169 (previously presented)

169. A system as recited in claim 62, in which the selector comprises a selection interface that allows the at least one motion control device to be selected programmatically.

Claim 170 (previously presented)

170. A system as recited in claim 62, in which the selectable software driver, associated with the selectable motion control device, is made accessible to the motion software by the selector.

Claim 171 (previously presented)

171. A system as recited in claim 64, in which a definition of the common interface is acquirable from an operating system.

Claim 172 (previously presented)

172. A system as recited in claim 64, in which a definition of the common interface is acquirable from a persistent storage medium.

Claim 173 (previously presented)

173. A system as recited in claim 65, in which the software system is capable of acquiring a definition of the common interface from an operating system.

Claim 174 (previously presented)

174. A system as recited in claim 65, in which the software system is capable of acquiring a definition of the common interface from a persistent storage medium.

Claims 175 – 182 (previously canceled)

Claim 183 (previously presented)

183. A system as recited in claim 86, in which the selector comprises a user interface that allows a user to select at least one motion control device.

Claim 184 (previously presented)

184. A system as recited in claim 86, in which the selector comprises a selection interface that allows programmatic selection of at least one motion control device.

Claim 185 (previously presented)

185. A system as recited in claim 86, in which the selectable software driver, associated with the selectable motion control device, is made accessible to the software system by the selector.

Claim 186 (previously presented)

186. The system of claim 86, wherein the software system is capable of communicating with at least one selected software driver such that at least one motion control device moves an object in a desired manner.

Claim 187 (previously presented)

187. A system as recited in claim 87, in which a definition of the common interface is acquirable from an operating system.

Claim 188 (previously presented)

188. A system as recited in claim 87, in which a definition of the common interface is acquirable from a persistent storage medium.

Claim 189 (previously presented)

189. A system as recited in claim 88, in which the software system is capable of acquiring a definition of the common interface from an operating system.

Claim 190 (previously presented)

190. A system as recited in claim 88, in which the software system is capable of acquiring a definition of the common interface from a persistent storage

Claims 191 – 192 (previously canceled)